Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of the Petitions of:	
CONSTELLATION COMMUNICATIONS, INC.	RM No. 7771
TRW, INC.	RM No. 7773
AMERICAN MOBILE SATELLITE CORPORATION	RM No. 7806
ELLIPSAT CORPORATION	RM No. 7805
For Amendment of Parts 2, 22 and 25 of the Commission's Rules to Allocate Spectrum for, and to Establish Other Policies Relating to Satellite Systems in the RDSS Bands.	

REPLY COMMENTS

Motorola Satellite Communications, Inc. ("Motorola"), through its attorneys, hereby submits its reply comments in opposition to the above-captioned petitions for rulemaking of Constellation Communications, Inc. ("Constellation"), TRW, Inc. ("TRW"), American Mobile Satellite Corporation ("AMSC"), and Ellipsat Corporation ("Ellipsat").[1/] As set forth in Motorola's previous comments in this proceeding, as well as in the comments

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1/ These reply comments are timely filed pursuant to the Commission's Order Extending Time for Reply Comments, DA 91-1340, released Oct. 25, 1991. At the time it submitted its comments in this proceeding, Motorola also filed a protective rulemaking petition in order to preserve its right to a pioneer's preference for its innovative IRIDIUM™ satellite system. See Petition for Rulemaking of Motorola Satellite Communications, Inc., RM No. _____ (October 16, 1991).

of several other parties, the requested rule changes are unnecessary and would be contrary to the public interest.

I. INTRODUCTION

There is no need to institute a time-consuming rulemaking proceeding at this time to reallocate the RDSS bands and establish new licensing rules in order to act on the pending RDSS applications. As Motorola previously has pointed out in its application and other filings, the Commission can apply its existing rules and waiver policies to grant a license to any applicant who is fully qualified to construct, launch and operate an RDSS system. It also has ample authority to dismiss those applicants who have not demonstrated their qualifications or who have otherwise prepared defective applications. To the extent that more than one applicant is found qualified to operate incompatible systems, the Commission should undertake to determine which system best serves the public interest in terms of efficient use of the frequency spectrum and service to the public. Such a determination can be made pursuant to a streamlined comparative hearing process on an expedited basis.

In the comments filed in response to the Commission's public notices in this proceeding, several parties expressed views quite similar to Motorola's specific proposals. Thus, Constellation concurs with Motorola's suggestion that the Commission carefully scrutinize all of the pending applications and return as unacceptable for filing those applications which

fail to provide all of the information required by the rules.[2/] Loral Qualcomm Satellite Services, Inc. ("Loral") agrees that the Commission should apply strict qualification standards to each of the pending applicants, including more stringent financial and technical requirements. In addition, Constellation, TRW and Loral urge the dismissal of any application that does not propose to offer "true" RDSS services in the RDSS bands.[3/] And TRW concurs with Motorola's suggestion that the Commission establish stringent progress milestones for constructing, launching and operating any of the licensed systems.[4/]

The processing of the current group of applications on an ad hoc basis is preferable to separate or concurrent rulemaking proceedings for several reasons. Most importantly, the institution of a rulemaking proceeding now would only further delay the provision of needed radiodetermination and other mobile services to the public. It has been over five years since the Commission allocated the RDSS bands and licensed systems to provide radiodetermination services over dedicated satellite systems. To date, no such system has been constructed while the demand for RDSS remains high. In addition, Motorola and other applicants have identified a strong demand in this country and elsewhere for portable handheld mobile services which can be offered on a worldwide basis. Due to the long lead times

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2/ See Comments of Constellation, RM-7773, at 9.

3/ See Comments of TRW, RM-7806, at 10-11; Comments of Constellation, RM-7773, at 9-10; Comments of Loral, at 2-4.

4/ See Response of TRW, File Nos. 9-DSS-P-91(87), et al., at 9-10 (Aug. 5, 1991).

associated with designing and constructing global satellite systems, any undue delay in the regulatory process will cause even further delays in the provision of service to the public.

Second, as the upcoming World Administrative Radio Conference ("WARC-92") approaches, it is critical that the Commission indicate to other countries its strong support for viable RDSS systems. As the Commission is well aware, the United States WARC-92 position favors upgrading of the current RDSS allocations and advancement of additional MSS allocations both for LEO and geostationary systems. If adopted at the WARC-92, these positions likely would prompt other countries and international organizations to consider advancing systems similar in design and concept to some of those currently under consideration. It would be counterproductive and against the interests of the United States for the Commission to await the outcome of a rulemaking proceeding before licensing RDSS systems, while other countries advance their proposed systems in a more expedited fashion.

Third, regulatory delay and uncertainty can be expected to have a negative impact upon potential investors and lenders interested in financing the proposed systems. These factors likewise affect the internal business plans of the applicants. Both investors and permitees need to know the conditions and regulations under which their proposed satellite systems will be operating. They also must be able to predict the marketplace environment at the time the proposed systems become operational.

None of this can be accomplished during the pendency of a protracted rulemaking proceeding.

Fourth, based upon Motorola's preliminary analysis of the proposed systems, there does not appear to be any legitimate basis for multiple systems to share the same frequency spectrum in an economically viable manner. Unlike the dedicated RDSS system applications which were before the Commission in 1986, the current group of applicants propose widely divergent systems with increased usage of the available spectrum. Any sharing of spectrum among the proposed systems would significantly reduce the capacity of each system, and thereby invalidate many of the financial assumptions on which their systems are based. Moreover, it is extremely unlikely that the financial community will ever support more than one of the proposed systems. In light of these realities, a rulemaking proceeding would serve no useful purpose.

II. AMSC'S REALLOCATION PROPOSALS ARE NOT IN THE PUBLIC INTEREST

No commentor, other than AMSC, supported AMSC's proposals to reallocate the RDSS bands for solely MSS geostationary systems and to establish a new paired downlink with the RDSS uplink band. All of the parties commenting on these proposals recognized that such a reallocation is incompatible with low-Earth orbit satellite systems, and would eliminate the possibility of RDSS ever being provided in the designated bands. AMSC attempts to demonstrate the lack of need for RDSS; however, as evidenced by the proposals of five of the six pending RDSS

applicants, there still exists a strong demand for such services. The fact that a dedicated RDSS system has not been constructed to date merely indicates the lack of economic viability for a system which provides nothing else, and not the lack of demand for RDSS. The combination of services and markets proposed in the IRIDIUM™ system application clearly justifies the retention of an RDSS allocation worldwide. AMSC's proposals also are contrary to the United States position at WARC-92 to elevate RDSS to primary status in all three ITU Regions along with MSS on a co-primary basis, and to require compatibility between RDSS and MSS systems in the RDSS bands.[5/]

Moreover, several commentors objected to AMSC's request for an additional MSS allocation to be paired with the RDSS uplink band. As pointed out by Motorola, TRW and others, AMSC has not demonstrated the need for such a repairing of frequency bands.[6/] None of the proposed LEO systems requires the requested change in order to offer both RDSS and MSS in the RDSS bands. Indeed, the IRIDIUM™ system can operate most efficiently simply

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5/ See WARC-92 Report, 6 F.C.C. Rcd. 3900, 3906-07 (1991). TRW's proposed reallocation of the RDSS bands for only spread spectrum systems also is contrary to the United States position at WARC-92. See Motorola Comments at 9-10. Motorola recognizes the concerns of the Committee on Radio Frequencies of the National Academy of Sciences - National Research Council ("CORF") regarding adequate protection from MSS operations in the RDSS uplink band. Because Motorola proposes to operate bidirectionally, and because its downlinks might cause interference to Radio Astronomers if provided in the same frequency spectrum, Motorola has proposed to operate its system above 1616 MHz.

6/ See Comments of TRW, RM-7806, at 5-8; Comments of Constellation, RM-7806, at 6; Consolidated Comments and Petition to Deny of Satellite CD Radio, RM-7806, at 3-5.

by utilizing the RDSS uplink band for both Earth-to-space and space-to-Earth user transmissions.[7/] To the extent that additional spectrum can be identified for MSS operations, Motorola urges the Commission to maintain the greatest flexibility possible in its allocation tables.

III. THE COMMISSION SHOULD NOT ESTABLISH OPERATING CRITERIA OR AN INDUSTRY COORDINATION COMMITTEE AT THIS TIME

Several parties have suggested the establishment of operating criteria and an industry committee to address interference issues and compatibility questions between licensed systems.[8/] Motorola believes that the establishment of such procedures and/or committees would serve no useful purpose. The applicants are free to meet at any time on their own to work out potential interference and coordination concerns. However, given the current size of the processing group and the requirements of the systems under consideration, Motorola fails to see any advantage in creating a committee to discuss interference issues and coordination procedures at this time.[9/]

Rather than establish such criteria or committees, the Commission should focus its efforts on processing the pending applications and dismissing those applications from applicants

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[7/] Loral's System A also proposes operation in one band for user transmissions.

[8/] See Comments of TRW, RM-7771, at 7-9;

[9/] For example, Motorola has a requirement for at least 10.5 MHz of L-band spectrum for its user links in order to maintain an economically viable system. With the possible exception of Constellation, all of the other proposed systems have conflicting requirements for L-band spectrum.

that are not fully-qualified to implement their proposed systems expeditiously or that have prepared defective applications. The Commission has ample authority to dismiss defective applications as well as proposals from unqualified applicants.[10/] Stringent financial and technical qualifying standards must be applied to ensure that those proposed systems authorized by the Commission have the best opportunity for actual implementation. In addition, any application which does not propose to offer true RDSS should be dismissed as unacceptable for filing.[11/]

Moreover, none of the alternative proposals for sharing spectrum present an adequate solution to the interference and capacity issues confronting the Commission. While certain systems claim to be able to manage with only a few megahertz of bandwidth (e.g., Constellation), others require considerably more spectrum in order to become economically viable.[12/] Similarly, CDMA does not provide an acceptable sharing mechanism for the current group of applicants.[13/] As Motorola has previously demonstrated, CDMA modulation for MSS systems is not the panacea that it originally was thought to be for dedicated RDSS systems.[14/] There are significant penalties associated with

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10/ See Motorola Comments at 20-21.

11/ Id, at 21-26.

12/ TRW also opposes the segmentation of the RDSS L-band into 2 MHz pieces because only Constellation's proposed system could be authorized under such a proposal. See Comments of TRW, RM-7771, at 10-13.

13/ See also Comments of Constellation, RM-7773, at 8 n.13.

14/ See Consolidated Opposition and Reply of Motorola, File Nos. 9-DSS-P-91(87), et al., at 32-24 (July 3, 1991).

operating more than one CDMA system in the same band. Indeed, other modulation techniques (such as FDMA/TDMA) offer far greater technical and operational advantages than CDMA.

The only solution available to the Commission for choosing between the proposed systems may be comparative hearings. If required, such hearings should be streamlined to the greatest extent possible in order to avoid undue delay. In light of the importance of these proceedings to the competitiveness of the U.S. satellite industry and the need for expedition, it may be appropriate for the Commission to sit en banc to consider these important policy issues.

Regardless of the manner in which licensees are approved, it is important that the Commission continue to establish strict progress milestones for the construction, launch and operation of all licensed systems.[15/] All licensees should be required to report to the Commission on a regular basis the status of their efforts and certify their continuing ability to meet the progress milestones established for their systems. Rigorous enforcement of construction and launch milestones will ensure that valuable spectrum is not warehoused and that the available frequencies are used efficiently and in a timely manner.

15/ See RDSS Licensing Order, 104 F.C.C.2d 650, 664-65 (1986).

IV. CONCLUSION

For the foregoing reasons, the Commission should deny the above-captioned Petitions for Rulemaking and promptly process all of the applications for service in the RDSS bands in accordance with the comments set forth herein and in Motorola's earlier comments in this proceeding.

Respectfully submitted,

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November 14, 1991

CERTIFICATE OF SERVICE

I, Philip L. Malet, hereby certify that the foregoing Reply Comments were served by first-class mail, postage prepaid, this 14th day of November, 1991 on the following persons:

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